

IN THE CLAIMS:

Claims 1-23. (Cancelled).

Claim 24. (New) A substantially pure or recombinant antigenic polypeptide of SEQ ID NO:2.

Claim 25. (New) The polypeptide of Claim 24, wherein the polypeptide comprises:

- a) residues 1-101 of SEQ ID NO:2;
- b) residues 102-195 of SEQ ID NO:2;
- c) residues 196-297 of SEQ ID NO:2;
- d) residues 1-328 of SEQ ID NO:2; or
- e) residues 1-606 of SEQ ID NO:2.

Claim 26. (New) A heterodimeric composition comprising the polypeptide of Claim 24 and IL-12R β 1.

Claim 27. (New) The composition of Claim 26 capable of binding IL-B30/p40.

Claim 28. (New) A kit comprising the polypeptide of Claim 24 and instructions for use.

Claim 29. (New) The kit of Claim 28, wherein the kit also contains:

- a) IL-12R β 1 polypeptide;
- b) p40, IL-B30, or IL-B30/p40 polypeptides; or
- c) an antibody having binding affinity for SEQ ID NO:2.

Claim 30. (New) A method of producing an antigen:antibody complex, comprising contacting an antibody that specifically binds to the polypeptide of Claim 24, with the polypeptide of Claim 24, thereby allowing the complex to form.

Claim 31. (New) A method of modulating the physiology or development of a cell comprising contacting the cell with an agonist or antagonist of SEQ ID NO:2.

Claim 32. (New) The method of Claim 31, wherein the physiology or development is T cell response.

Claim 33. (New) The method of Claim 31, wherein:

- a) the agonist stimulates T cell response; or
- b) the antagonist inhibits T cell response.

Claim 34. (New) The method of Claim 31, wherein:

- a) the antagonist comprises an extracellular domain of SEQ ID NO:2; or
- b) an antibody that specifically binds the polypeptide of Claim 24.

Claim 35. (New) A method of treating an immune disorder comprising administering an agonist or antagonist of SEQ ID NO:2.

Claim 36. (New) The method of Claim 35, wherein the agonist is used:

- a) to mount humoral and cellular immunity;
- b) for anti-tumor effects;
- c) for anti-viral effects;
- d) to activate NK cells; or
- e) to activate T cells.

Claim 37. (New) The method of Claim 35, wherein the antagonist is used to:

- a) treat a chronic Th1 mediated disease;
- b) treat a chronic inflammatory condition; or
- c) inhibit memory T cells or NK cells.

Claim 38. (New) The method of Claim 35, wherein the immune disorder is:

- a) a tumor or a viral disorder;
- b) a chronic Th1 mediated disease; or
- c) a chronic inflammatory condition.